TP-LINK®

User Guide

TL-WN781ND

150Mbps Wireless N PCI Express Adapter

Rev: 3.0.0

1910011334

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http://www.tp-link.com

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1） This device may not cause harmful interference.
2） This device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

"To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."

CE Mark Warning

CE 1588

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Canadian Compliance Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux norms CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes:

(1) cet appareil ne doit pas provoquer d'interférences et

(2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 2 dBi. Antennas not included in this list or having a gain greater than 2 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

Industry Canada Statement

Complies with the Canadian ICES-003 Class B specifications.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Korea Warning Statements

당해 무선설비는 운용중 전파혼신 가능성이 있음.

NCC Notice & BSMI Notice

注意！

依據 低功率電波輻射性電機管理辦法

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性或功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通行；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信規定作業之無線電信。低功率射頻電機需忍受合法通信或工業、科學以及醫療用電波輻射性電機設備之干擾。

減少電磁波影響，請妥適使用。

安全諮詢及注意事項

●請使用原裝電源供應器或只能按照本產品注明的電源類型使用本產品。

●清潔本產品之前請先拔掉電源線。請勿使用液體、噴霧清潔劑或濕布進行清潔。

●注意防潮，請勿將水或其他液體潑灑到本產品上。

●插槽與開口供通風使用，以確保本產品的操作可靠並防止過熱，請勿堵塞或覆蓋開口。

●請勿將本產品置放於靠近熱源的地方。除非有正常的通風，否則不可放在密閉位置中。

●請不要私自打開機殼，不要嘗試自行維修本產品，請由授權的專業人士進行此項工作。

Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.
- Don’t disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.
- Avoid water and wet locations.

This product can be used in the following countries:

AT	BG	BY	CA	CZ	DE	DK	EE
ES	FI	FR	GB	GR	HU	IE	IT
LT	LV	MT	NL	NO	PL	PT	RO
RU	SE	SK	TR	UA	US		

DECLARATION OF CONFORMITY

For the following equipment:

Product Description: **150Mbps Wireless N PCI Express Adapter**

Model No.: **TL-WN781ND**

Trademark: **TP-LINK**

We declare under our own responsibility that the above products satisfy all the technical regulations applicable to the product within the scope of Council Directives:

Directives 1999/5/EC, Directives 2006/95/EC, Directives 1999/519/EC, Directives 2011/65/EU

The above product is in conformity with the following standards or other normative documents:

EN 300 328 V1.8.1

EN 301 489-1 V1.9.2 & EN 301 489-17 V2.2.1

EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011

EN 62311: 2008

The product carries the CE Mark:

CE1588

Person responsible for making this declaration:

Yang Hongliang
Product Manager of International Business

Date of issue: 2015

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Chapter 1 Product Overview

1.1 Introduction

The TP-LINK TL-WN781ND 150Mbps Wireless N PCI Express Adapter connects your desktop computer to a Wi-Fi network for lag-free video streaming, online gaming, secure Internet surfing and Internet calls.

1.2 Features

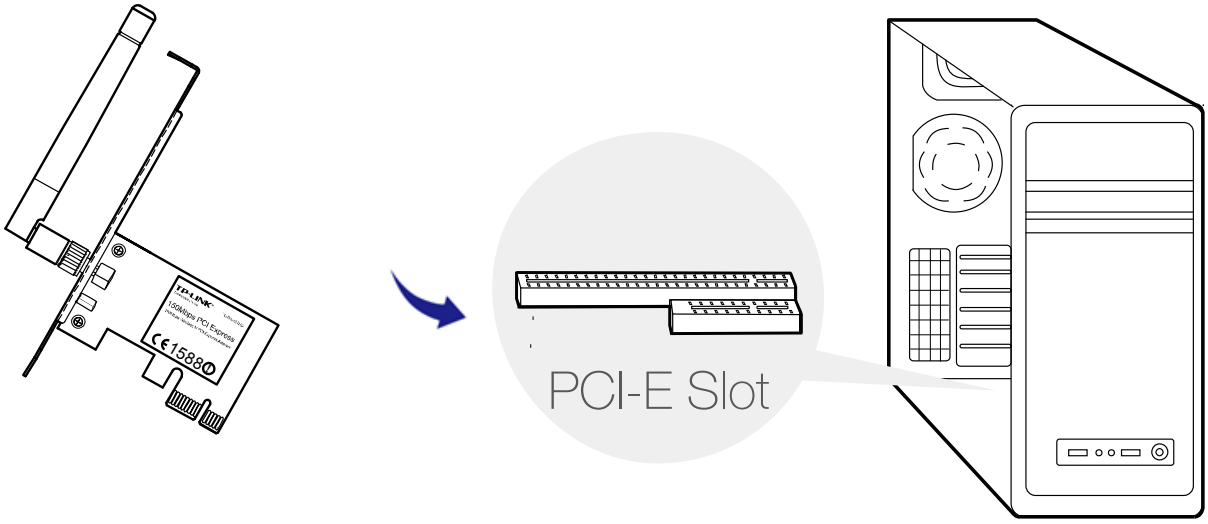
- Complies with IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE 802.11e, IEEE 802.11i standards
- Supports WEP, WPA/WPA2, WPA/WPA2-PSK data security, IEEE802.1x authentication, TKIP/AES encryption
- Supports high rate of up to 150Mbps for maximum throughput, supports automatically adjust to lower speeds due to distance or other operating limitations
- Provides 32-bit PCI Express interface
- Supports Ad Hoc and Infrastructure modes
- Good capability on anti-jamming
- Supports roaming between access points when configured under Infrastructure mode
- Easy to configure and provides monitoring information
- Supports Windows 8.1/8/7/Vista/XP

1.3 LED status

Status	Working Status
Off	The driver has not been installed; The adapter's radio has been disabled.
Flashing Slowly	The driver has been installed but no data is being transmitted or received.
Flashing Quickly	Data is being transmitted or received.

Chapter 2 Connect to a Computer

Before using your adapter, connect it to your computer by following these steps:



1. Turn off your computer, unplug the power cord and other connected peripheral devices to your computer.
2. Remove the case panel. Locate an available PCI-E slot and remove its slot cover.
3. Carefully insert the adapter into the PCI-E slot and secure it with the retaining screw.
4. Replace the case panel.
5. Reconnect the power cord and turn on your computer.

Note:

- In Windows XP/Vista, a **Found New Hardware Wizard** window will appear when the adapter is detected. Please click **Cancel**.

Chapter 3 Install driver and utility

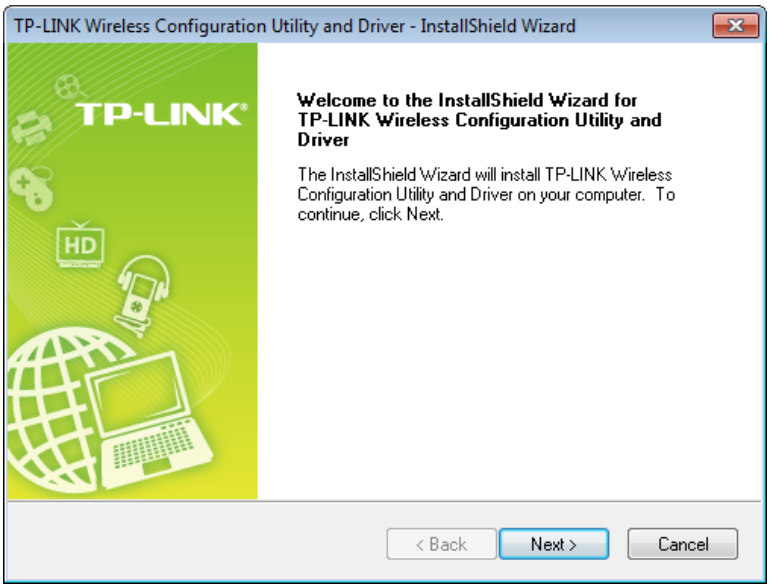
The Setup Wizard will guide you through the installation procedures. We use the procedures in Windows 7 as an example - the procedures may vary slightly for other versions of Windows.

1. Insert the resource CD into your CD drive and click the **Run Autorun.exe** from the pop-up AutoPlay window. Select **TL-WN781ND** and click **Install Driver and Utility** to begin.

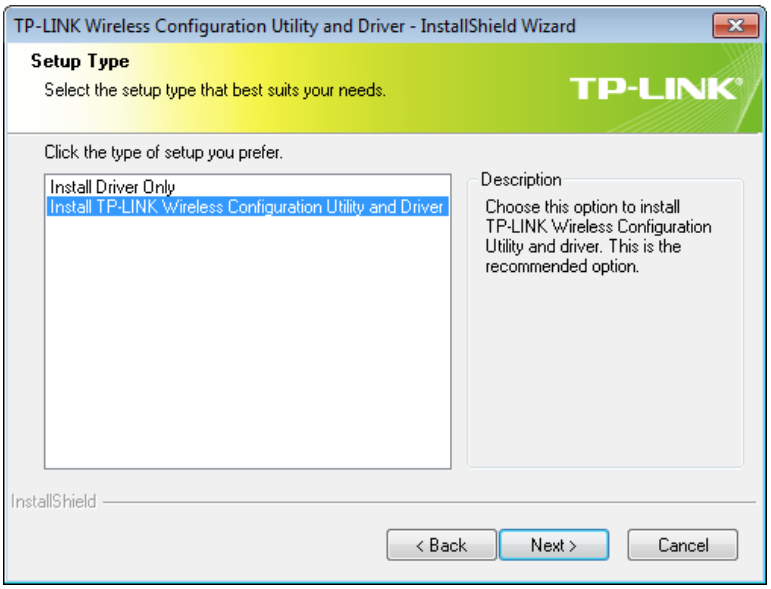
Note:

- The CD is included in the package. If your CD does not work or your computer doesn't support the CD, you can also download the driver and utility from the TP-LINK website (www.tp-link.com).
- In some operating systems, the CD screen will pop up automatically. Otherwise, run the CD manually.

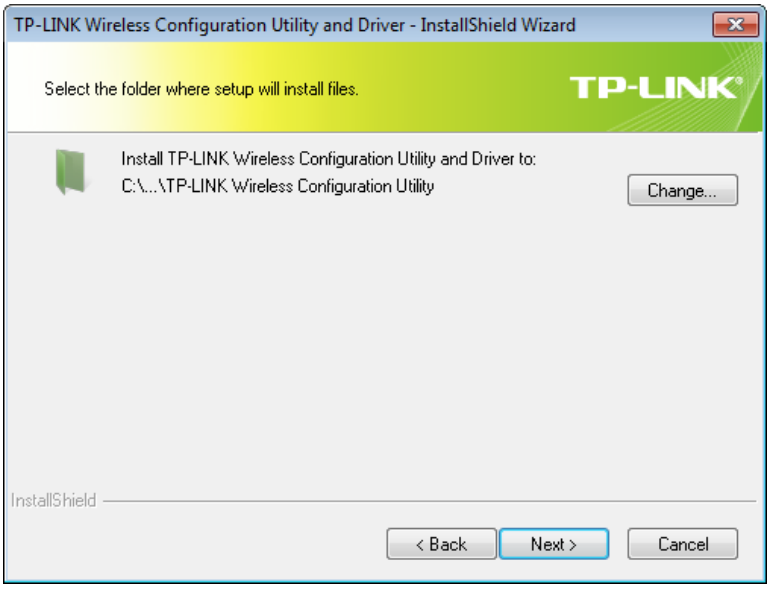
2. The InstallShield Wizard window displays. Click **Next** to continue.


TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard
TP-LINK
Welcome to the InstallShield Wizard for TP-LINK Wireless Configuration Utility and Driver
The InstallShield Wizard will install TP-LINK Wireless Configuration Utility and Driver on your computer. To continue, click Next.
< Back
Next >
Cancel

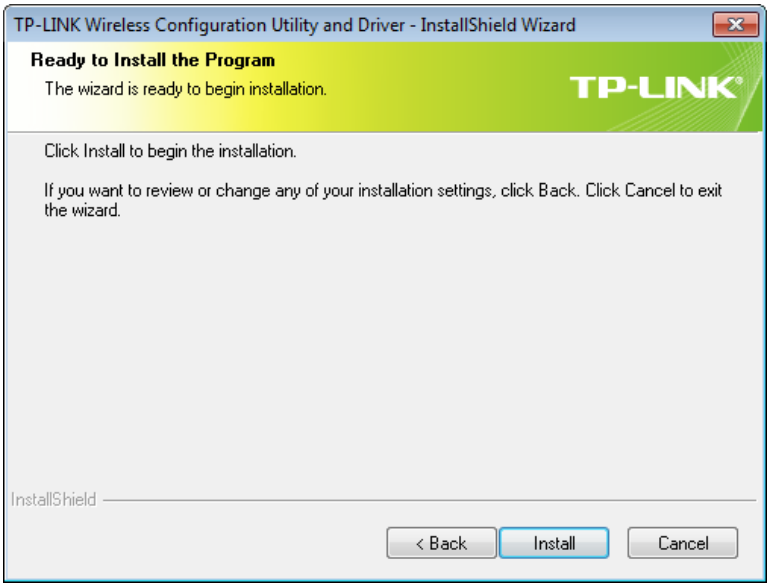
3. Choose a setup type. It is recommended to select **Install TP-LINK Wireless Configuration Utility and Driver**. Click **Next**.

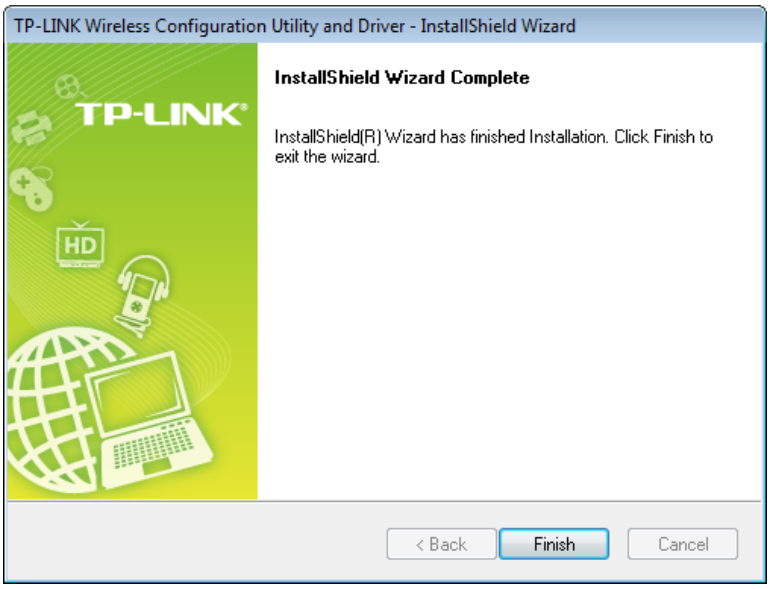

TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard
Setup Type
Select the setup type that best suits your needs.
TP-LINK
Click the type of setup you prefer.
Install Driver Only
Install TP-LINK Wireless Configuration Utility and Driver
Description
Choose this option to install TP-LINK Wireless Configuration Utility and driver. This is the recommended option.
InstallShield
< Back
Next >
Cancel

4. If you want to change install location, click **Change** to specify the location for the software installation. Or you can leave it default. Click **Next**.

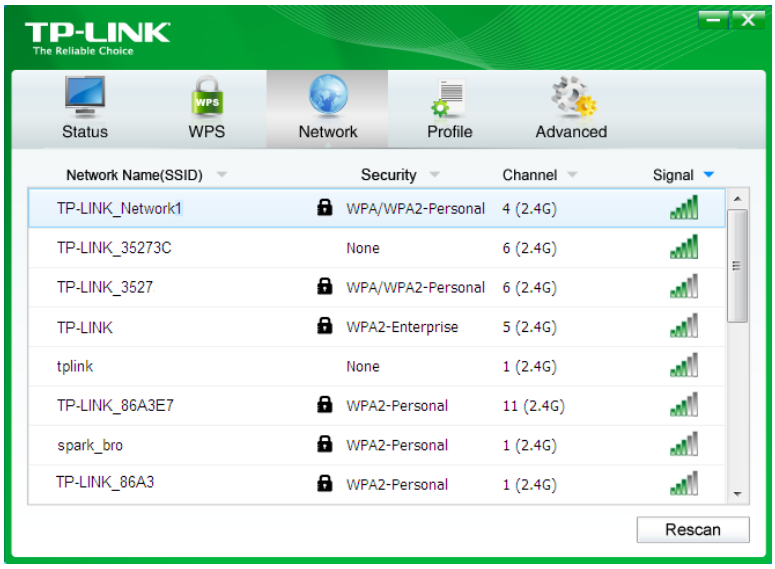

TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard
Select the folder where setup will install files.
TP-LINK
Install TP-LINK Wireless Configuration Utility and Driver to:
C:\...\TP-LINK Wireless Configuration Utility
Change...
InstallShield
< Back
Next >
Cancel

5. Click **Install**. After a few minutes, the installation completes. Click **Finish**.


TP-LINK Wireless Configuration Utility and Driver - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
TP-LINK
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel



6. TP-LINK utility pops up after installation. Its icon appears on the desktop as and in the Windows system tray as . You can use the TP-LINK utility to join a Wi-Fi network with your adapter. For more guidance, please refer to Join a Wireless Network.



Chapter 4 Join a Wireless Network

There are three options of using the adapter to join a Wi-Fi network.

Option 1: TP-LINK Utility

TP-LINK Utility lets you easily connect the adapter to a Wi-Fi network and manage the adapter.

Option 2: WPS (Wi-Fi Protected Setup)

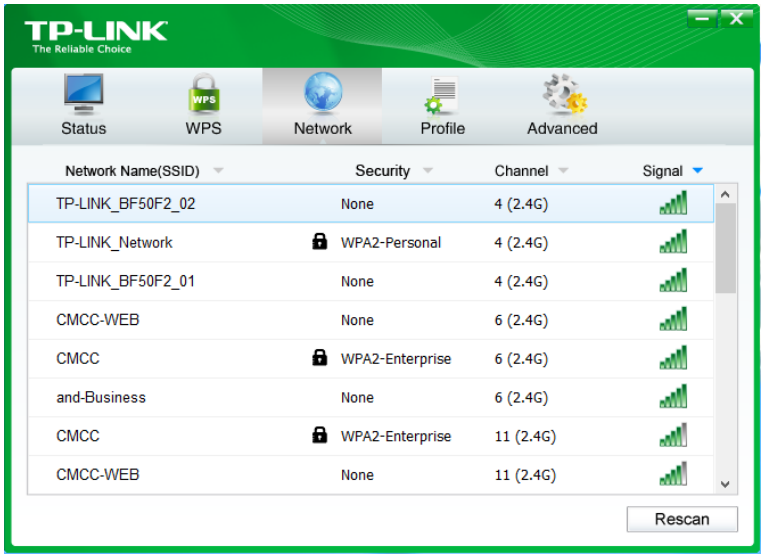
WPS (Wi-Fi Protected Setup) is a network security standard for easily adding computers and other devices to a home network. Use this method if your wireless router or access point supports WPS.

Option 3: Windows Wireless Utility

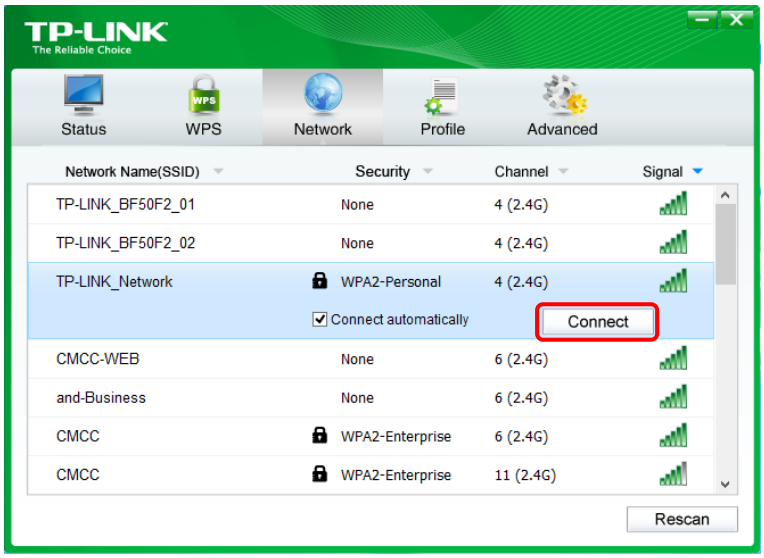
You can use the Windows WLAN Autoconfig service (for Windows 8.1/8/7/Vista) and the Wireless Zero Configuration service (for Windows XP) to join a Wi-Fi network.

4.1 TP-LINK Utility

1. Double-click (TP-LINK Utility icon). The **Network** screen displays.



2. Select the network you want to join from the list on this screen and click **Connect**. If you want the adapter to automatically connect to the network next time, select the **Connect automatically** checkbox. Enter your Wi-Fi password when prompted.



Note:

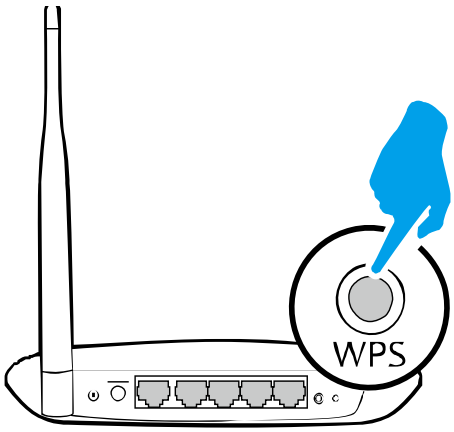
If your Wi-Fi network is not displayed in the list, you can try to join it by WPS or by adding a profile in the Profile screen.

4.2 WPS (Wi-Fi Protected Setup)

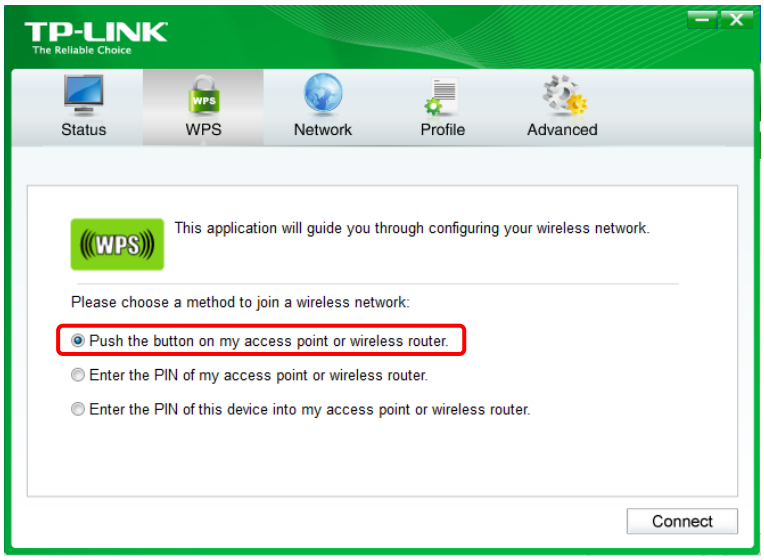
WPS can be activated via PBC (Push Button Configuration) and PIN code. Please refer to PBC or PIN below.

➢ **PBC**

1. Press the **WPS/QSS** button on your router or AP.



2. Open TP-LINK Utility and click **WPS** tab. Select **Push the button on my access point or wireless router** and click **Connect**.


TP-LINK
The Reliable Choice
Status
WPS
Network
Profile
Advanced
This application will guide you through configuring your wireless network.
Please choose a method to join a wireless network:
Push the button on my access point or wireless router.
Enter the PIN of my access point or wireless router.
Enter the PIN of this device into my access point or wireless router.
Connect

3. The following screen indicates a successful connection by WPS. Click **OK**.

➢ **PIN**

Option 1

1. Open TP-LINK Utility and click **WPS** tab. Select **Enter the PIN of my access point or wireless router**. Enter the PIN of your router or AP. Click **Connect**.

TP-LINK
The Reliable Choice
Status
WPS
Network
Profile
Advanced
This application will guide you through configuring your wireless network.
Please choose a method to join a wireless network:
Push the button on my access point or wireless router.
Enter the PIN of my access point or wireless router.
PIN: 13492564
Enter the PIN of this device into my access point or wireless router
Connect

Note:

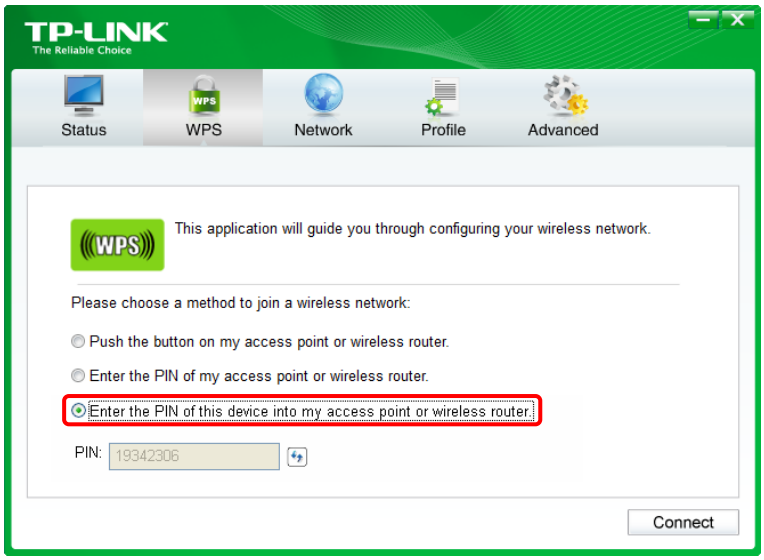
The default PIN of your router or AP is printed on the product label of your router or AP. If you generated a new PIN for your router, please enter the new one.

2. The following screen indicates a successful connection by WPS. Click **OK**.

Option 2

Note: This method is only available in Windows XP and Windows Vista.

1. Open TP-LINK Utility and click **WPS** tab. Select **Enter the PIN of this device into my access point or wireless router**. The screen displays a PIN of the adapter, which is generated randomly. Click **Connect**.


TP-LINK
The Reliable Choice
Status
WPS
Network
Profile
Advanced
WPS
This application will guide you through configuring your wireless network.
Please choose a method to join a wireless network:
Push the button on my access point or wireless router.
Enter the PIN of my access point or wireless router.
Enter the PIN of this device into my access point or wireless router.
PIN: 19342306
Connect

2. Log in to the Web Management page of your router or AP. Go to the **WPS** page, enter the PIN of the adapter in the corresponding field and click **Connect**.

3. The following screen indicates a successful connection by WPS. Click **OK**.

4.3 Windows Wireless Utility

Follow the instructions in the appropriate section below to use your computer system's built-in wireless utility: Windows 8.1/8/7, Windows XP, Windows Vista.

➢ **Windows 8.1/8/7**

1. Click or (Network icon) on the system tray. Select the network you want to join, and click **Connect**. Enter your Wi-Fi password when prompted.

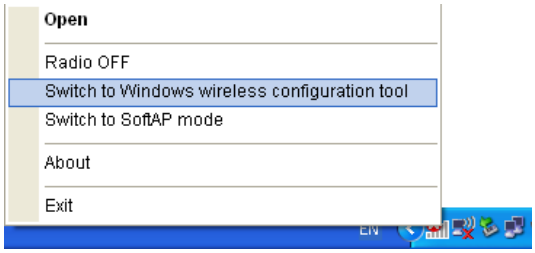
Note:

If you do not want to enter the Wi-Fi password, you can also join a wireless network either by pushing the WPS or QSS button on your router or AP, or entering the PIN of your router when the screen prompts you to do so, and click **Next**.

2. When **Connected** displays next to the network name (SSID) on the screen, it indicates a successful network connection.

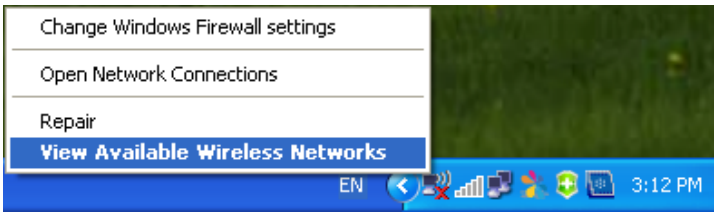
➢ **Windows XP**

1. Right-click (TP-LINK Utility icon) on the system tray. (If you do not see the icon, click the hidden icons arrow on the system tray.) Select **Switch to Windows wireless configuration tool**.



Or you can open the TP-LINK Utility, select **Advanced** tab, then select **Use Windows wireless configuration tool**.

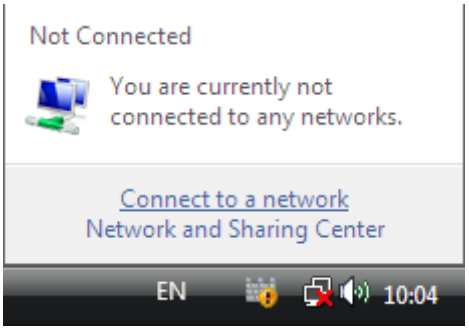
2. Right-click (Windows XP Wireless Zero Configuration Utility icon) on the system tray, and select **View Available Wireless Networks**.



3. Select the network you want to join, and click **Connect**. Enter your Wi-Fi password when prompted.

➢ **Windows Vista**

1. Click (Network icon) on the system tray, and select **Connect to a network**.



2. Select the network you want to join, and click **Connect**. Enter your Wi-Fi password when prompted.

Chapter 5 Management

TP-LINK Utility provides you with an easy way to manage your adapter. It includes the following sections:

Status - View the information of the current Wi-Fi network connection and of the adapter.

Profile - Save or manage various Wi-Fi network connection settings.

Advanced - Turn on or off the SoftAP mode and power saving mode, switch between TP-LINK Utility and Windows Wireless Utility (for Windows XP only).

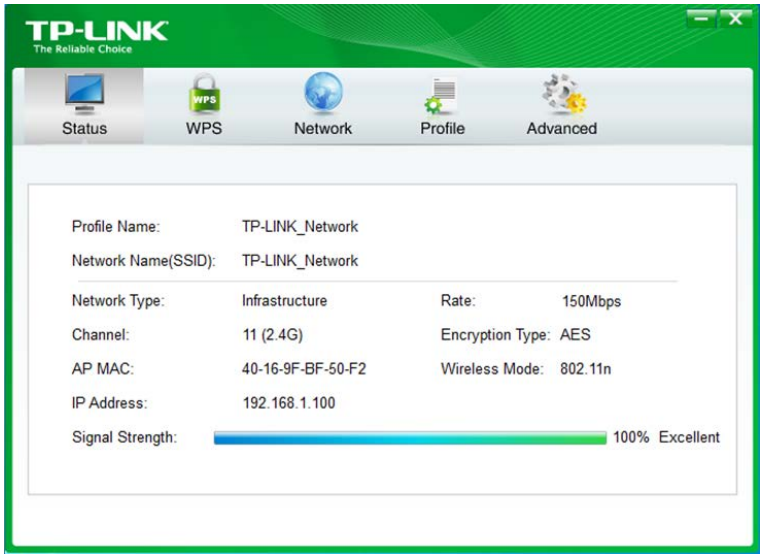
SoftAP - Configure the settings of the network shared by your adapter, and view the IP address of your adapter when it works on SoftAP mode.

About – View your adapter's Utility version and its Driver version.

Double-click (TP-LINK Utility icon) and click the **Status**, **Profile** or **Advanced** tab to manage the corresponding section of your adapter.

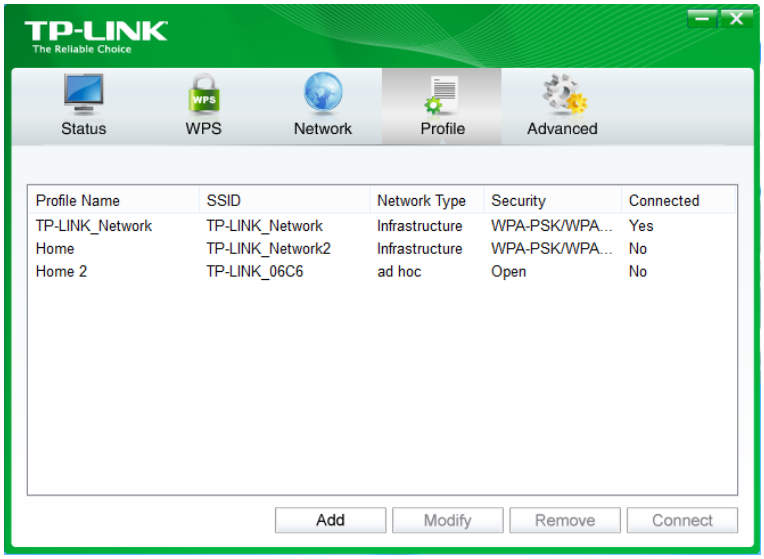
5.1 Status

You can view the IP address and MAC address of the adapter, the signal strength of the Wi-Fi network, and other information of the network status as shown in the following figure.



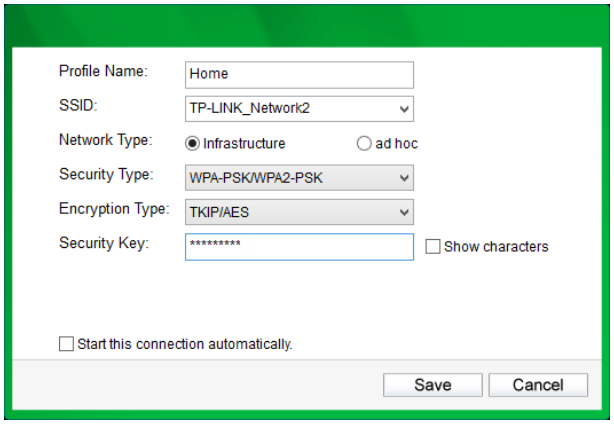
5.2 Profile

The **Profile** screen lets you save and manage different Wi-Fi network connection settings as profiles so that you can quickly and simply connect to your network. Moreover, you can join a hidden Wi-Fi network that does not broadcast its SSID by adding a profile, provided that you know its wireless settings, such as SSID, security type, and encryption type. For more details, please refer to the instructions below: To add a new profile, To join a Wi-Fi network, To manage an existing profile.



➢ **To add a new profile**

1. Click the **Add** button, and then a new window will open.
2. Complete the settings as shown in the following figure, and click **Save**.



Profile Name - Enter a name for your profile, such as Home, Office, Coffeehouse. Do not enter the profile name that already exists.

SSID - Select your Wi-Fi network from the drop-down list or enter your Wi-Fi network name manually.

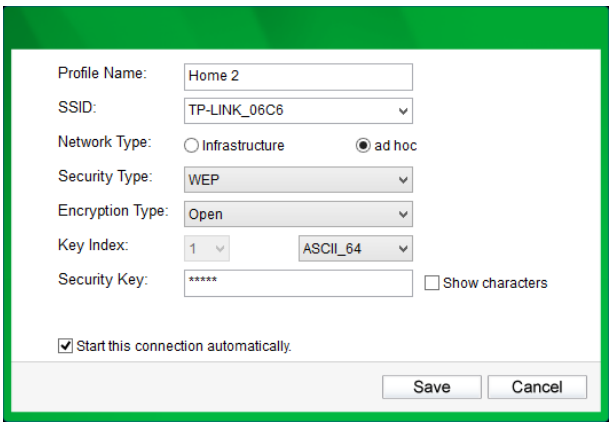
Network Type - Select **Infrastructure** if you want to connect to a wireless router or an access point. Select **ad hoc** if you want to connect to another wireless client, such as an adapter.

- **Infrastructure**

If you select **Infrastructure**, you are asked to select or enter the corresponding wireless settings, which should be the same as those of your Wi-Fi network.

- **ad hoc**

If you select **ad hoc**, you are asked to configure the wireless settings for your network, including choosing the operating frequency band, the security type, the encryption type and setting a security key.



Note:

As for **Key Index**, you can select ASCII or Hexadecimal format from the drop-down list.

ASCII_64 - Please enter 5 ASCII characters.

ASCII_128 - Please enter 13 ASCII characters.

Hexadecimal_64 - Please enter 10 Hexadecimal digits (any combination of 0-9, a-f, A-F, excluded space).

Hexadecimal_128 - Please enter 26 Hexadecimal digits (any combination of 0-9, a-f, A-F, excluded space).

- **To join a Wi-Fi network**

If you want to join a Wi-Fi network that listed in the profile screen, select the profile and click **Connect** button in the bottom right corner.

- **To manage an existing profile**

If you want to change the name or the wireless settings of an existing profile, select it and click the **Modify** button in the bottom right corner of the Profile screen, then you can edit the settings of this profile. If you want to delete a profile that you no longer use, select it and click the **Remove** button.

5.3 Advanced

Select wireless configuration tool - In Windows XP. You can either use TP-LINK Utility or Windows wireless configuration tool. While in other operating systems, since you can use both TP-LINK Utility and Windows wireless configuration tool at the same time, this function is disabled.

Wireless network adapter switch - If you've installed several adapters in your computer, you can switch to another adapter among the drop-down list.

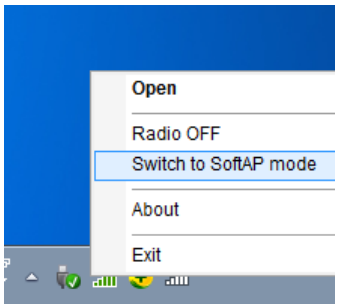
SoftAP mode - Once **ON** is selected, the adapter will work as an AP (For Windows 7 only).

Power Save mode - Once **ON** is selected, the adapter will automatically reduce its power consumption when not being used.

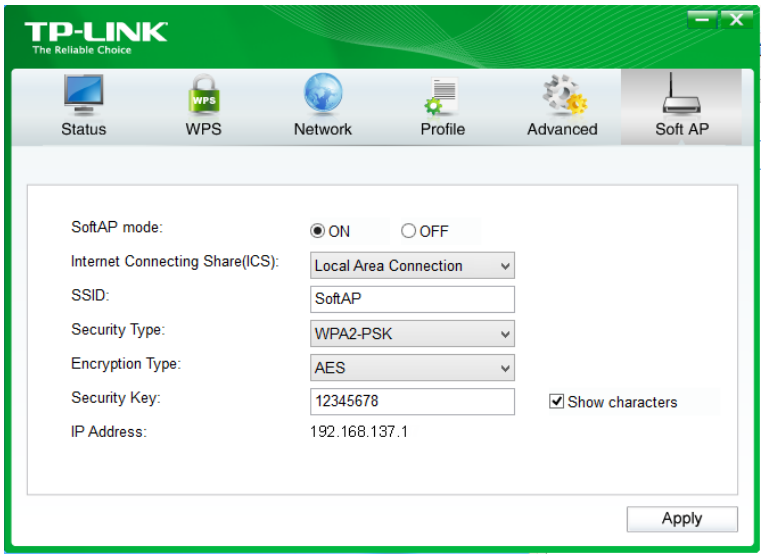
5.4 SoftAP (For Windows 7 only)

SoftAP is short for Software enabled Access Point. This Function is available only in Windows 7. When the adapter works in SoftAP mode, it allows the computer to create a wireless hotspot that other wireless devices nearby can use.

To switch to SoftAP mode, right-click the utility icon in the system tray and select **Switch to SoftAP mode**.



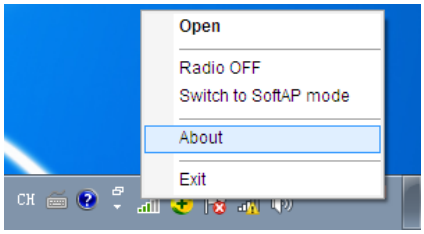
After switching to SoftAP mode, the SoftAP icon appears in the utility. Click the **SoftAP** tab, and complete the settings, then click **Apply** for the settings to take effect.



- **Soft AP mode:** Select **ON** or **OFF** to enable or disable this function.
- **Internet Connecting Share(ICS):** Select a network connection that can access to the Internet from the drop-down list. For example, if your computer is connecting to the Internet via an Ethernet cable, you should select the corresponding **Local Area Connection** so as to share the network with other wireless devices.
- **SSID:** Set a name for the wireless network shared by your adapter. The default is SoftAP.
- **Security Type:** The security type here is set to be WPA2-PSK which is based on 802.11i and uses AES (Advanced Encryption Standard).
- **Encryption Type:** The encryption type here is set to be AES.
- **Security Key:** Set a security key for the wireless network that shared by your adapter. It is recommended that you specify another key instead of the default key 12345678. When another wireless device connects to the network shared by your adapter, it will be asked to enter the corresponding security key.
- **IP Address:** Displays the IP address of the adapter when it works in SoftAP mode. You can also check if the network shared by your adapter is working properly by checking this IP Address. For example, if the IP Address is 0.0.0.0, it means that the Internet connection is failed.

5.5 About

You can view the adapter's information in the **About** screen, such as the UI version (Utility version) and the Driver version. Right-click (TP-LINK Utility icon) in the system tray and select **About**, then the About screen displays.



Chapter 6 Uninstall driver and utility

The software uninstallation steps vary a bit in different systems, please follow the appropriate instructions for your Windows operating system: Windows 8/8.1, Windows XP/Vista/7.

- **Windows 8/8.1**

Uninstall driver:

Go to **Start > Apps**, and find the **TP-LINK** application. Click **Uninstall - TP-LINK TL-WN781ND Driver**, then follow the on-screen instructions to complete the uninstallation.

Uninstall utility:

Go to **Start > Apps**, and find the **TP-LINK** application. Click **Uninstall - TP-LINK Wireless Configuration Utility**, then follow the on-screen instructions to complete the uninstallation.

- **Windows XP/Vista/7**

Uninstall driver:

Go to **Start > All Programs > TP-LINK > Uninstall - TP-LINK TL-WN781ND Driver**. Follow the on-screen instructions to complete the uninstallation.

Uninstall utility:

Go to **Start > All Programs > TP-LINK > Uninstall - TP-LINK Wireless Configuration Utility**. Follow the on-screen instructions to complete the uninstallation.

Appendix A: Specifications

Normal	
Interface	32 bit PCI Express Interface
Standards	IEEE 802.11n, IEEE 802.11g, IEEE 802.11b, IEEE 802.1x, IEEE 802.11e, IEEE 802.11i
Operating System	Windows XP, Windows Vista, Windows 7, Windows 8, Windows 8.1
Throughput	150Mbps (Maximal)
Data Security	62/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK
Frequency*	2.4 ~ 2.4835GHz

Environmental and Physical	
Working Temperature	0℃~40℃ (32℉~104℉)
Storage Temperature	-40℃~70℃(-40℉~158℉)
Working Humidity	10% ~ 90% RH, Non-condensing
Storage Humidity	5% ~ 90% RH, Non-condensing

* Only 2.412GHz~2.462GHz is allowed to be used in USA, which means only channel 1~11 is available for American users to choose.

Appendix B: Glossary

- **802.11b -** The 802.11b standard specifies a wireless product networking at 11 Mbps using direct-sequence spread-spectrum (DSSS) technology and operating in the unlicensed radio spectrum at 2.4GHz, and WEP encryption for security. 802.11b networks are also referred to as Wi-Fi networks.
- **802.11g -** specification for wireless networking at 54 Mbps using direct-sequence spread-spectrum (DSSS) technology, using OFDM modulation and operating in the unlicensed radio spectrum at 2.4GHz, and backward compatibility with IEEE 802.11b devices, and WEP encryption for security.
- **802.11n -** 802.11n builds upon previous 802.11 standards by adding MIMO (multiple-input multiple-output). MIMO uses multiple transmitter and receiver antennas to allow for increased data throughput via spatial multiplexing and increased range by exploiting the spatial diversity, perhaps through coding schemes like Alamouti coding. The Enhanced Wireless Consortium (EWC) was formed to help accelerate the IEEE 802.11n development process and promote a technology specification for interoperability of next-generation wireless local area networking (WLAN) products.
- **Ad hoc Network -** An ad hoc network is a group of computers, each with a Wireless Adapter, connected as an independent 802.11 wireless LAN. Ad hoc wireless computers operate on a peer-to-peer basis, communicating directly with each other without the use of an access point. Ad hoc mode is also referred to as an Independent Basic Service Set (IBSS) or as peer-to-peer mode, and is useful at a departmental scale or SOHO operation.
- **Infrastructure Network -** An infrastructure network is a group of computers or other devices, each with a Wireless Adapter, connected as an 802.11 wireless LAN. In infrastructure mode, the wireless devices communicate with each other and to a wired network by first going through an access point. An infrastructure wireless network connected to a wired network is referred to as a Basic Service Set (BSS). A set of two or more BSS in a single network is referred to as an Extended Service Set (ESS). Infrastructure mode is useful at a corporation scale, or when it is necessary to connect the wired and wireless networks.
- **SSID -** A **S**ervice **S**et **Id**entification is a thirty-two character (maximum) alphanumeric key identifying a wireless local area network. For the wireless devices in a network to communicate with each other, all devices must be configured with the same SSID. This is typically the configuration parameter for a wireless PC card. It corresponds to the ESSID in the wireless Access Point and to the wireless network name. *See also* Wireless Network Name and ESSID.
- **WEP -** (**W**ired **E**quivalent **P**rivacy) **-** A data privacy mechanism based on a 64-bit or 128-bit or 152-bit shared key algorithm, as described in the IEEE 802.11 standard. To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters)

format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

- **Wi-Fi -** A trade name for the 802.11b wireless networking standard, given by the Wireless Ethernet Compatibility Alliance (WECA, see http://www.wi-fi.net), an industry standards group promoting interoperability among 802.11b devices.
- **WLAN -** (**W**ireless **L**ocal **A**rea **N**etwork) - A group of computers and associated devices communicate with each other wirelessly, which network serving users are limited in a local area.
- **WPA -** (**W**i-Fi **P**rotected **A**ccess) **-** A wireless security protocol uses TKIP (Temporal Key Integrity Protocol) encryption, which can be used in conjunction with a RADIUS server.